Notice of Allowability	Application No.	Applicant(s)	
	09/748,144	HORN ET AL.	
	Examiner	Art Unit	
	Ronald D. Hartman Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the response filed on 8/3/2005*.

2. ☒ The allowed claim(s) is/are *1-2 and 4-6 (renumbered as 1-5, respectively)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. Claims 1-2 and 4-6 are presented for further examination.

Allowable Subject Matter

2. Claims 1-2 and 4-6 are allowed over the prior art of record.

As per claims 1-2 and 4-6, specifically independent claims 1, 4, 5 and 6, the prior art of record fails to teach a method for predicting crack growth in a nuclear reactor, wherein water chemistry characteristics are received utilizing a global computer network, and wherein the characteristics are used to determine a real time crack growth prediction, in combination with the other claimed features. It is noted that the global computer network has been interpreted to be the Internet.

It is noted that several references were discovered which taught "stress corrosion cracking" (SCC) as being a concern for all water boiling reactors, but none specifically disclosed the utilization of a global computer network for predicting real time crack growth of the nuclear reactor.

3. The most pertinent prior art was issued to:

- Shimanuki et al., U.S. Patent No. 5,307,385, in which a prediction range of remaining service life is produced with regards to water chemistry characteristic;
- Horn et al., U.S. Patent No. 6,754,673, in which a reactor is controlled over a global computer network, however this reference belongs to the same inventive entity as well as Assignee, and therefore is not applicable as prior art.
- Anderson, U.S. Patent No. 5,673,297, in which a method for mitigating stress corrosion cracking is controlled by controlling crack tip pH;
- Ibe et al., U.S. Patent No. 5,398,268, in which a nuclear reactors water chemistry is controlled to reduce stress corrosion cracking;
- Horn et al., U.S. Patent Application No. 2001/0053940, in which a reactor is controlled over a global computer network, however this reference belongs to the same inventive entity as well as Assignee, and therefore is not applicable as prior art.

- Kim et al., U.S. Patent No. 6,259,758, in which a water-cooled reactor is disclosed that allows for stress corrosion cracking to be controlled by controlling crack tip pH;

- Uchida et al., U.S. Patent No. 5,623,109, in which a plant monitoring system for a reactor is disclosed, wherein water chemistry is utilized for prediction of the current status of the reactor wherein the status includes crack growth rates; and

- Uchida et al., U.S. Patent No. 5,817,958, in which a plant monitoring system for a reactor is disclosed, wherein water chemistry is utilized for prediction of the current status of the reactor wherein the status includes crack growth rates.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D. Hartman Jr. whose telephone number is (571) 272-3684. The examiner can normally be reached on Mon.-Fri., 11:00 - 8:30 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Knight
Supervisory Patent Examiner
Group 3600

October 16, 2005

Ronald D Hartman Jr.
Patent Examiner
Art Unit 2121

XRDH